4.5 HAZARDS

This chapter describes the existing conditions and applicable regulations and plans for hazardous materials use, emergency response plans, and health hazards in the vicinity of the project site. Impacts are analyzed by applying the regulatory and planning constraints. The impact analysis includes consideration of the issues identified within the State CEQA Guidelines, Environmental Checklist Form, which lists the following potential concerns relating to hazards: "Would the proposal involve: a risk of accidental explosion or release of hazardous substances (including but not limited to: oil, pesticides, chemicals, or radiation), possible interference with an emergency response plan or emergency evacuation plan, the creation of any health hazards or potential health hazards, the exposure of people to existing sources of potential health hazards, or increased fire hazards in areas with flammable brush, grass, or trees?" (California Governor's Office of Planning and Research, 2001). Since the project area is located in a marine environment, the potential concern of increased fire hazard included on the State CEQA checklist does not apply and therefore will not be further considered. The following is a discussion of those impact areas pertinent to the Proposed Project.

4.5.1 Environmental Setting

4.5.1.1 Hazardous Materials

Hazardous materials include all flammable, reactive, corrosive, or toxic substances that, when put in contact with the environment, can adversely affect living organisms. Hazardous materials for the Proposed Project include explosives for pier demolition, and hydrocarbons associated with vehicles and watercraft. Implementation of the Proposed Project would involve the transportation of explosives to the project site, and detonation of the explosives when attached to the caissons. Also, both the trucks and marine vessels required for implementation of the Proposed Project would have a primary fuel tank to run the engine and typically would have additional fuel and lubricating oils stored onboard.

The health of workers and the general public are potentially at risk of exposure whenever hazardous materials are used. It is necessary to differentiate between the "hazards" of these materials and the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to human health and the environment is determined by the probability of exposure to hazardous material and the severity of harm such exposure would pose.

State and local agencies with hazardous material responsibilities for the project vicinity include the United States Coast Guard (USCG), the California Department of Fish and Game (CDFG), Santa Barbara County, city of Long Beach, and the city of Port Hueneme. Applicable regulations include the Federal Water Pollution Control Act (section 311[c][2]), and the Shipboard Oil Pollution Emergency Procedure. Project related activities, such as demolition operations and transportation of explosive devices and other project materials involved in the removal of the pier structure, must comply with the State and local agency regulations and guidelines.

4.5.1.2 Emergency Response/Evacuation Plans

The agencies responsible for emergency response and evacuation plans in the project vicinity are the USCG, the local fire authorities, and harbor patrol offices. The local fire authorities respond to hazardous materials spills. See the discussion below for information on emergency response. (Oil spill offshore: USCG, OSFR.)

4.5.2 Impacts and Mitigation Measures

The following discusses the potential for explosion, oil spills, interference with emergency response plans, and exposure of people to potential health hazards.

4.5.2.1 Methodology

Information about the project-related use of hazardous materials, spill prevention plans, and emergency response plans were obtained through review of State and local policies, and through study of the ARCO PRC-421 Pier Removal Project Permit Application. The application, prepared by Fairweather Pacific, LLC and submitted to the California State Lands Commission, contains an *Explosive Transportation and Operations Plan* and an *Oil Spill Contingency Plan (*included in this EIR as Appendix E and Appendix M), and *Preservative Materials (*Appendix R*)*; and supplies pertinent information on hazardous conditions and mitigation measures. The impacts of the Proposed Project were determined by comparing regulatory constraints with the changes resulting from activities of the Proposed Project.

4.5.2.2 Significance Criteria

The criteria used to determine whether identified impacts are significant and adverse were developed through a review of the State CEQA Guidelines, Environmental Checklist Form. For the purpose of this analysis, an action would have a significant effect if it would result in: 1) a substantial risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals, or radiation); 2) interference with an emergency response plan or emergency evacuation plan; 3) the creation of any health hazards or potential health hazards; or 4) exposure of people to existing sources of potential health hazards.

4.5.2.3 Hazards Impacts

Short-term Impacts. The following are the potential impacts occurring during the demolition and recovery phase of the Proposed Project.

HAZ-1: Release of hazardous materials during transportation of explosives.

Discussion:

The removal of the PRC-421 Pier requires the use of explosives to topple the caissons. Appendix E of this EIR contains the approved *Explosive Transportation and Operations Plan* describing the general guidelines that will be implemented to safeguard personnel and prevent property damage during the pier demolition procedure. Safe practices, warnings, and

procedures are delineated in this section, and are based on the required federal, State, and local laws and safety regulations. All required safety equipment will be on hand and used as required. If at any time personnel or equipment are in danger, the operation will be secured until the danger is eliminated or removed. Safety of all personnel and equipment will be the first and foremost consideration.

Transportation of explosives will be conducted per U.S. Department of Transportation (DOT) and USCG requirements. Each explosive cutter will be properly packaged for shipment and secured in an approved offshore box/storage magazine. Once the transportation magazine is properly loaded and secured, it will be loaded onto and secured in place on a DOT approved truck for transportation to the approved explosive-out pier. The packaged explosives will be staged at an appropriate onshore location until the scheduled date of demolition.

Impact/ Mitigation:

The Applicant has prepared and will implement an *Explosive Transportation and Operations Plan* (Appendix E) for the Proposed Project so as to ensure that accidents during transportation and storage of explosives are prevented. Through the implementation of this plan, the transportation of explosives will not have a significant impact (Class 3). Therefore, no mitigation is required.

HAZ-2: Release of hazardous materials during operation of explosives.

Discussion:

Due to the weight of the caissons and the dynamics involved with underwater cutting operations, conventional cutting methods cannot be safely conducted. Therefore, explosives will be used to cut and topple the concrete caissons. Two methods for severing the caissons by explosives have been reviewed (see Appendix K–*Explosive Methodology & Analysis*): one was an internal cutting method and the other was an external cutting method. Based on an analysis of these two methods, the Applicant selected the external method to be the superior alternative due to the greater controllability, lower overall underwater blast effect and subsequent environmental effect.

Blast effects on nearby structures, facilities, and marine vessels were analyzed and are described in the *Explosive Transportation and Operations Plan* (Appendix E). The plan concludes that the procedures outlined in the ARCO's Project Execution Plan, and the physical elements of the project site would reduce the blast effects to a less-than-significant level. For example, the shallow depth of the area (approximately 28 to 32 feet [8.5m to 9.8m]) would allow for immediate surface reflection of the blast wave, effectively eliminating the potential for overpressure to reach any facility beyond approximately 30 feet (9.1 m) from the caisson being blasted. The closest facility will be the barges located 150 feet (45.7 m) away from the structure prior to blasting. Therefore, all facilities including the barges, and other permanent structures such as Venoco's seep line (at a distance of 900 feet, 274.3 m), Ellwood Pier (at 4,890 feet, 1,490.5 m), the Barge *Jovan* (at 8,550 feet, 2,606 m) and Platform Holly (at 12,450 feet, 3,794.6 m) will be unaffected.

The MSDS (Material Safety Data Sheet, Appendix E) for the explosive recommends that post-detonation fumes be allowed to clear before entering the area. In the nearshore environment of this operation, the coastal breeze will clear the area almost immediately. This is a safety precaution for workers in nearby vessels; individuals on shore will not be at any risk of exposure.

Impact/Mitigation:

The Applicant has prepared and will implement an *Explosive Transportation and Operations Plan* (Appendix E) to ensure that accidents during the use of explosives are prevented and that hazards associated with the material and its use are avoided. Through the implementation of this plan and related procedures, the potential level of impact for the use of explosive during the Proposed Project will not be significant (Class 3). Therefore, no mitigation is required.

HAZ-3: Release of hydrocarbons.

Discussion:

The PRC-421 pier was the location of two oil production wells (PRC-421-7 and -10). These oil wells were plugged and abandoned in 1953 and 1954 in accordance with then existing State Division of Oil and Gas procedures. The surface seals for these wells were set from 60 to 38 feet (18.28m to 11.58m) for Well No. 7 (measured from derrick floor; the top of plug is therefore near the ocean bottom) and from 75 to 39 feet (22.86m to 11.8m) for Well No. 10. The potential for an oil spill from these wells therefore has been eliminated and is considered to be less-than-significant. The only potential sources of hydrocarbon spills are limited to project vessels and on-board equipment during pier removal activities, e.g., spills arising from leakage of fuel, motor oil, or hydraulic fluid during operation and/or equipment maintenance, etc.

The removal of the remnant pier structure requires the use of watercraft, vehicles, and equipment powered by diesel fuel and lubricated by oil and other mechanical fluids, which are considered hazardous substances. Accidents involving these craft, vehicles, and equipment would have the potential to adversely affect the environment through the release of these hazardous substances.

The safe operation of the watercraft, vehicles, and equipment is necessary to limit the potential for an accident to occur. This requires licensed, trained personnel, and the adoption of a regular, comprehensive maintenance program. Beyond safe operation, there are several factors that reduce the potential effect of a spill, if one were to occur.

Safety and prevention measures are outlined in Appendix M, which contains the approved, project-specific *Oil Spill Contingency Plan* that addresses the prevention measures and spill response team capabilities for any release of hydrocarbons to the environment. All construction watercraft, vehicles, and equipment shall carry supplies of fuel and other mechanical fluids only in the quantities needed for their operation. As described in the

Applicant's 2003 Permit Application, to prevent or minimize spill related impacts the following are part of the project Proposed Project:

- Well conductor cutting and removal operations will follow the procedures and conditions contained in the Supplemental Notice to be approved by the Division of Oil, Gas and Geothermal Resources and the CSLC.
- ARCO and its contractor shall follow its preventative measures and oil spill response procedures as outlined in its *Oil Spill Contingency Plan* (Appendix M).

Finally, the USCG and local emergency agencies have response plans and regulatory programs in place to contain and clean up potential fuel spills.

Impact/Mitigation:

The above protective measures integrated into the Proposed Project will reduce the potential for or impacts from such spills to a less than significant level. Therefore, no mitigation is required.

HAZ-4: Interference with emergency response/evacuation plans.

Discussion:

The Proposed Project would not interfere with implementation of emergency response plans or emergency evacuation plans in the project area.

Impact/Mitigation:

No impact (Class 3). Therefore, no mitigation is required.

HAZ-5: Health hazards from use of explosives.

Discussion:

As stated above, the weight of the caissons and the dynamics involved with underwater cutting operations will require the use of explosives to safely cut and topple the concrete caisson structures. The external cutting method was determined to be the superior alternative due to the greater controllability, lower overall underwater blast effect and subsequent environmental effect. Although the proposed use of explosives for the purpose of cutting the caissons would result in fewer hazards to personnel than other removal methods, the potential does exist for accidental hazards to the public and project personnel in the use of explosives to the project site.

The public, either on the beach or surfing, e.g., at Haskell's Beach, 1/2 mile (0.8 km) away, will not be at risk during the planned operational use of explosives.

To prevent accidents, explosives operations will be conducted in compliance with applicable State and federal guidelines by trained, experienced personnel who will employ

proven methods to ensure personnel safety. As stated above, Appendix E, *Explosive Transportation and Operations Plan*, describes safe procedures using explosives at the work site. In addition, the Operations plan calls for safe procedures such as ensuring that:

- Exposure of explosive operations will be limited to a minimum number of personnel, for a minimum amount of time, to the minimum amount of explosive materials consistent with safe and efficient operations.
- All barges and vessels shall be winched to a safe distance, approximately 150 feet (45.7 m) away from the structure, prior to blasting.
- The Safety Procedures and Misfire Contingencies section of the *Explosive Transportation and Operations Plan* (Appendix E) describes required methodologies during all explosive operations.

Impact/Mitigation:

Due to the nature of explosive use and marine operation, the potential exists for significant impacts to result from the Proposed Project (Class 2). The following measure, in addition to the provisions of the *Explosive Transportation and Operations Plan*, shall be implemented to ensure that these impacts are reduced to a less than significant impact.

Mitigation Measure HAZ-5:

- Prior to the initiation of explosive use, all personnel involved in operations around/with explosive use, i.e. work crew, marine mammal monitors, environmental compliance monitors, and State representatives, will be briefed on the procedures and requirements outlined in the *Explosives Transportation and Operation Plan*.

HAZ-6: Personnel safety during diving operations.

Discussion:

Divers will be needed for underwater tasks such as jetting, airlifting, attaching explosives to the remnant caissons, and cutting the remnant pier pilings. Diving involves unique risks and hazards, and complete cooperation with all safety precautions and procedures will be mandatory. Winter ocean conditions are much more hazardous due to the potential for high waves and strong winds. Thus, all work will be completed during the months of September and October, not only to avoid the CDFG identified bird nesting period and whale migration period, but also to ensure less severe conditions for project diving personnel. Ocean conditions will be taken into consideration during both diving and marine vessel operations for all portions of the Proposed Project. The dive supervisor and the barge master on the LLB will be responsible for determining safe weather operating ranges for all diving conditions. All diving operations will be conducted using surface-supplied air diving techniques in accordance with OSHA and USCG commercial diving standards (29 CFR Ch. XVII and 46 CFR Ch. I, respectively). All underwater work procedures necessary to perform these underwater tasks have been used by commercial divers for decades and are routinely performed. The diving personnel, equipment, and

techniques that will be utilized in the Proposed Project are commercially regulated and should not be confused with sport diving (SCUBA).

Impact/Mitigation:

The diving operation, as described above, will result in no significant impact (Class 3) to affected personnel. Therefore, no mitigation is required.

Long-term Impacts. The following are the potential impacts of resulting from consequences of implementing this project.

HAZ-7: Retention of concrete caissons in the environment.

Discussion:

Padre took representative samples from the remaining concrete caissons on June 11, 2002. Samples were sent to Schneider Laboratories for analysis of asbestos containing material (ACM). Based on this sampling event, the concrete caissons contain 100 percent non-asbestos, non-fibrous material (or 0 percent ACM). As such, this material is below the established State Total Threshold Limit Concentration (TTLC) of 1.0 percent, and is, therefore, not considered a hazardous material that would affect the ambient underwater environment in the long term.

Impact/Mitigation:

This impact is considered less than significant (Class 3). Therefore, no mitigation is required.

HAZ-8: Introduction of DENSO coating to the environment.

Discussion:

To reduce future maintenance requirements on the piles and roosting/nesting platforms, and eliminate the aggressive corrosion effects of the seawater in the splash zone, a system of preservative products (DENSO brand protective products) will be applied to the pile(s) from -20' SWL to +10' SWL. The DENSO product is a 2-part wrap product consisting of paste-impregnated cloth tape that is covered with a bolt-on polyethylene UV-resistant cover. DENSO has a long history of corrosion prevention with this product. The portion of the pile above the +10' SWL elevation and the roosting/nesting platform structure(s) will be coated with high-build epoxy paint (Amerlok 400) for resistance to seawater and marine environments. For that portion of the pile below the DENSO protective wrap and above the seabed, sacrificial aluminum alloy anodes will be used to protect the submerged portion of the bare steel from corrosion.

The DENSO products will be applied on site by divers (submerged portion) and riggers (in air portion). A limited amount of repair to the epoxy paint is expected following installation. The epoxy paint and brackets for the anodes will be installed during fabrication on land.

According to the MSDS Product Information for the DENSO coating, DENSO is a chemically stable compound, which can only be softened (released to the ambient environment) if exposed to organic solvents such as Kerosene. Since contact with organic solvents will not occur, protective products will remain stable and not become a hazard (Class 3). Therefore, no mitigation is required.

Impact/Mitigation:

This impact is considered less than significant (Class 3). Therefore, no mitigation is required.